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Progressive Web App

These audits validate the aspects of a Progressive Web App.

App can load on offline/flaky connections

Ensuring your web app can respond when the network connection is unavailable or flaky is critical to providing your users a good experience. This is achieved through use of a Service Worker.

- Has a registered Service Worker
- URL responds with a 200 when offline

Page load performance is fast

Users notice if sites and apps don't perform well. These top-level metrics capture the most important perceived performance concerns.

- 99 First meaningful paint**: 1217.1ms** (target: 1,600ms)
- 98 Perceptual Speed Index**: 1213** (target: 1,250)
  - First Visual Change: **325ms**
  - Last Visual Change: **1831ms**
- 98 Estimated Input Latency**: 42.9ms** (target: 50ms)
- 99 Time To Interactive (alpha)**: 1229.2ms** (target: 5,000ms)
- Content scrolls at 60fps (Coming soon)
- Touch input gets a response in < 150ms (Coming soon)
- App is interactive without jank after the first meaningful paint (Coming soon)

Site is progressively enhanced

Progressive enhancement means that everyone can access the basic content and functionality of a page in any browser, and those without certain browser features may receive a reduced but still functional experience.

- Page contains some content when its scripts are not available

Network connection is secure

Security is an important part of the web for both developers and users. Moving forward, Transport Layer Security (TLS) support will be required for many APIs.

- Site is on HTTPS
- Site redirects HTTP traffic to HTTPS

User can be prompted to Add to Homescreen

While users can manually add your site to their homescreen in the browser menu, the prompt (aka app install banner) will proactively prompt the user to install the app if the below requirements are met and the user has visited your site at least twice (with at least five minutes between visits).

- Has a registered Service Worker
- Manifest exists

- Manifest contains start_url
- Manifest contains icons at least 144px**: found sizes: 512x512, 384x384, 192x192, 152x152, 144x144**
- Manifest contains short_name

Installed web app will launch with custom splash screen

A default splash screen will be constructed, but meeting these requirements guarantee a high-quality and customizable splash screen the user sees between tapping the home screen icon and your app's first paint.

- Manifest exists
- Manifest contains name
- Manifest contains background_color
- Manifest contains theme_color
- Manifest contains icons at least 192px**: found sizes: 512x512, 384x384, 192x192**

Address bar matches brand colors

The browser address bar can be themed to match your site. A theme-color meta tag will upgrade the address bar when a user browses the site, and the manifest theme-color will apply the same theme site-wide once it's been added to homescreen.

- Manifest exists
- HTML has a theme-color <meta>**: #2196F3**
- Manifest contains theme_color

Design is mobile-friendly

Users increasingly experience your app on mobile devices, so it's important to ensure that the experience can adapt to smaller screens.

- HTML has a viewport <meta>
- Content is sized correctly for the viewport

Best Practices

We've compiled some recommendations for modernizing your web app and avoiding performance pitfalls. These audits do not affect your score but are worth a look.

Using modern offline features

- **Offline:** Site does not use Application Cache
- **Offline:** Site does not use WebSQL DB.

Using modern protocols

- **Security:** Site is on HTTPS
- **Performance:** Site uses HTTP/2 for its own resources

Using modern CSS features

- **CSS:** Site does not use the old CSS flexbox

Using modern JavaScript features

- **JavaScript:** Site uses passive listeners to improve scrolling performance

  Consider marking your touch and wheel event listeners as `passive` to improve your page's scroll performance. Learn more.

  ▶ URLs

- **JavaScript:** Site does not use Mutation Events in its own scripts

Avoiding APIs that harm the user experience

- **Performance:** Site does not use document.write()
- **Performance:** Site does not use <link> that delay first paint**: 1 resource delayed first paint by 151ms**

  Link elements are blocking the first paint of your page. Consider inlining critical links and deferring non-critical ones. Learn more.

  ▶ URLs

- **Performance:** Site does not use <script> in head that delays first paint
- **Performance:** Site opens external anchors using rel="noopener"
- **UX:** Page does not automatically request geolocation on page load
- **UX:** Page does not automatically request notification permissions on page load

Accessibility

- **Accessibility:** Element aria-* roles are valid
- **Accessibility:** Elements with ARIA roles have the required aria-* attributes
- **Accessibility:** Element aria-* attributes are valid and not misspelled or non-existent.
- **Accessibility:** Element aria-* attributes have valid values
- **Accessibility:** Background and foreground colors have a sufficient contrast ratio

  Elements must have sufficient color contrast (Failed on 2 elements)

  ▶ 2 elements fail this test learn more

- **Accessibility:** Every image element has an alt attribute
- **Accessibility:** Every form element has a label
- **Accessibility:** No element has a tabindex attribute greater than 0

Other

- **Manifest:** Manifest's short_name won't be truncated when displayed on homescreen
- **Manifest:** Manifest's display property is set**: standalone**
- **UX:** Service worker makes use of push notifications, if appropriate (Coming soon)
- **UX:** Tap targets are appropriately sized for touch (Coming soon)
- **UX:** Payment forms marked up with [autocomplete] attributes (Coming soon)
- **UX:** Login forms marked up with [autocomplete] attributes (Coming soon)
- **UX:** Input fields use appropriate [type] attributes for custom keyboards (Coming soon)

Performance Metrics

These encapsulate your app's performance.

- **Performance:** Critical Request Chains: **7**

  The Critical Request Chains below show you what resources are required for first render of this page. Improve page load by reducing the length of chains, reducing the download size of resources, or deferring the download of unnecessary resources. Learn more.

  Longest request chain (shorter is better): **2**

  Longest chain duration (shorter is better): **1786.87ms**

  Longest chain transfer size (smaller is better): **99.15KB**

  Initial navigation

  - / (pomodori-pwa.firebaseapp.com)
    - js/manifest.58231a696da5e8a05d97.js (pomodori-pwa.firebaseapp.com) - **355.43ms, 1.90KB**
    - js/app.59ce6610806b54e7a098.js (pomodori-pwa.firebaseapp.com) - **400.04ms, 4.21KB**
    - css/app.0579663e7b0904c7228fe9b869d911f6.css (pomodori-pwa.firebaseapp.com) - **485.97ms, 16.41KB**
    - /css (fonts.googleapis.com) - **665.98ms, 2.46KB**
    - js/vendor.cb10c164ab52c8f85862.js (pomodori-pwa.firebaseapp.com) - **986.39ms, 100.17KB**
    - v19/2fcrYFNaTjcS6g4U3t-Y5UEw0lE80llgEseQY3FEmqw.woff2 (fonts.gstatic.com) - **1786.87ms, 47.16KB**
  - static/logo.png (pomodori-pwa.firebaseapp.com) - **1379.22ms, 2.56KB**

- **Performance:** User Timing marks and measures: **0**

Fancier stuff

A list of newer features that you could be using in your app. These audits do not affect your score and are just suggestions.

New JavaScript features

- **JavaScript:** Site does not use Date.now() in its own scripts

  Consider using `performance.now()` from the User Timing API instead. It provides high-precision timestamps, independent of the system clock. Learn more.

  ▶ URLs

- **JavaScript:** Site does not use console.time() in its own scripts